Please amend the present application as follows:

Claims

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("—"), as is applicable:

1. (Currently Amended) A ~~method for synthesizing filters~~ microelectromechanical system (MEMS) filter system, comprising:

~~providing~~ a first microelectromechanical system (MEMS) resonator; and

a second MEMS resonator ~~adjacent~~ closely spaced and mechanically separate from ~~to~~ the first MEMS resonator;, ~~and~~ wherein the first MEMS resonator is

~~electrically coupling~~ coupled to the ~~first MEMS resonator to the~~ second MEMS resonator through the electrostatic force acting between resonating portions of the MEMS resonators.

2. (Currently Amended) The ~~method~~ system of claim 1, further including ~~electrically coupling~~ additional MEMS resonators electrically coupled to the first MEMS resonator, the second MEMS resonator, or the first and second MEMS resonators.

3. (Currently Amended) The ~~method~~ system of claim 1, wherein the electrical ~~electrically~~ coupling between the first MEMS resonator and the second MEMS resonator includes ~~providing~~ an effective shunt ~~capacitor~~ capacitance to ground ~~in between the first MEMS resonator and the second MEMS resonator~~.

4. (Currently Amended) The ~~method~~ system of claim 1, wherein ~~electrically coupling includes effecting a series capacitance between the resonating body of~~ the first MEMS resonator is capacitively coupled ~~and that of~~ to the second MEMS resonator.

5. (Currently Amended) The ~~method~~ system of claim 1, wherein ~~electrically coupling includes providing an active component between~~ the first MEMS resonator and the second MEMS resonator are conductive.

6. (Currently Amended) The ~~method~~ system of claim ~~5~~ 1, ~~wherein the active component includes an amplifier~~further including a direct current (DC) voltage source, a first terminal coupled to the first MEMS resonator, and a second terminal coupled to the second MEMS resonator, wherein a first DC potential is imposed on the first terminal and a second DC potential different from the first DC potential is imposed on the second terminal.

7. (Currently Amended) The ~~method~~ system of claim ~~5~~ 6, ~~further including applying a polarization voltage to effect a resonance frequency at the first MEMS resonator that is substantially equal to the second MEMS resonator frequency; and cascading the first MEMS resonator with the second MEMS resonator such that Q amplification is effected~~ wherein responsive to the imposition of the first and second DC potentials to the first and second terminals, at least two frequency resonance peaks are elicited.

8. (Currently Amended) A microelectromechanical system (MEMS) filter system, comprising:

a first filter, including:

a first MEMS resonator and a second MEMS resonator; and

a coupling element disposed between ~~and separate from~~ the first and the second MEMS resonators and mechanically separate from the resonating portions of the resonators, wherein ~~a~~ the second MEMS resonator, the first MEMS resonator, and the coupling element are electrically coupled ~~to the first MEMS resonator~~.

9. (Currently Amended) The system of claim 8, further including at least one additional filter of like structure to the first filter, the at least one additional filter electrically coupled to and separate from the first filter ~~MEMS resonators electrically coupled to each other~~.

10. (Currently Amended) The system of claim 8, wherein the first MEMS resonator and the second MEMS resonator are electrically coupled with a shunt capacitor to ground disposed between the first MEMS resonator and the second MEMS resonatorfurther including a direct current (DC) voltage source, a first terminal coupled to the first MEMS resonator, and a second terminal coupled to the second MEMS resonator, wherein a first DC potential is imposed on the first terminal and a second DC potential different from the first DC potential is imposed on the second terminal.

11. (Currently Amended) The system of claim 8, wherein the first MEMS resonator and the second MEMS resonator are electrically coupled using a series capacitance disposed between the resonating body of the first MEMS resonator and that of the second MEMS resonator wherein responsive to the imposition of the first and second DC potentials to the first and second terminals, at least two frequency resonance peaks are elicited.

12. (Original) The system of claim 8, wherein the first MEMS resonator and the second MEMS resonator are electrically coupled using an active component disposed between the first MEMS resonator and the second MEMS resonator.

13. (Original) The system of claim 12, wherein the active component includes an amplifier.

14. (Currently Amended) A communications device, comprising:

a receiver; and

a microelectromechanical system (MEMS) filter system disposed in the receiver,

the MEMS filter system comprising:

a first MEMS resonator; and

a second MEMS resonator closely spaced and mechanically separate from the first MEMS resonator, wherein the second MEMS resonator is electrically coupled to the first MEMS resonator.

15. (Original) The communications device of claim 14, further comprising a transmitter.

16. (Currently Amended) The communications device of claim 15, wherein the transmitter comprises a second MEMS filter system, the second MEMS filter system comprising:

a third MEMS resonator; and

a fourth MEMS resonator closely spaced and separate from the third MEMS resonator, wherein the fourth MEMS resonator is electrically coupled to the third MEMS resonator.

17. (Currently Amended) The ~~method~~ communications device of claim ~~1~~ 14, further including ~~wherein electrically coupling includes providing~~ a coupling ~~capacitor~~ element disposed between the first MEMS resonator and the second MEMS resonator, wherein the second MEMS resonator, the first MEMS resonator, and the coupling element are electrically coupled.

18. (Currently Amended) The ~~system~~ communications device of claim ~~8~~ 17, wherein the ~~first MEMS resonator and the second MEMS resonator are electrically coupled with a~~ coupling ~~capacitor~~ element comprises an active device ~~disposed between the first MEMS resonator and the second MEMS resonator~~.

19. (New) A method for synthesizing filters, comprising:

providing a first microelectromechanical system (MEMS) resonator and a second MEMS resonator adjacent to the first MEMs resonator;

electrically coupling the first MEMS resonator to the second MEMS resonator, wherein electrically coupling includes providing an active component between the first MEMS resonator and the second MEMS resonator; and

applying a polarization voltage to effect a resonance frequency at the first MEMS resonator that is substantially equal to the second MEMS resonator frequency, and cascading the first MEMS resonator with the second MEMS resonator such that Q-amplification is effected.

20. (New) The method of claim 19, further including electrically coupling additional MEMS resonators electrically coupled to the first MEMS resonator, the second MEMS resonator, or the first and second MEMS resonators.